SC Million Solar Roofs Initiative

Summer 2005

In This Issue:

South Carolina Chapter Receives Official ASES Certification

The South Carolina Solar Council has received notification from the American Solar Energy Society (ASES) that the Chapter has achieved certification as an official state chapter of the ASES. The application was submitted in April following Council adoption of by-laws.

ASES is the United States section of the International Solar Energy Society which was formed in 1955 with 21 different countries as members, including the U.S. At present, 34 countries are members. All dedicated to promoting and implementing Solar Energy.

With the help of the South Carolina Energy Office and the U.S. Department of Energy Million Solar Roofs Initiative, a group of concerned citizens from across the state met in the fall of 2004 and agreed to create the state chapter.

On February 10, 2005, an organizational meeting of the South Carolina Solar Council was held at Furman University, in Greenville. After election of officers, the decision was made to develop permanent by-laws and proceed with an application to the American Solar Energy Society for South Carolina Chapter status. Final by-laws were adopted at the April meeting.

Currently, the Chapter is in the legal process for 501-(3)c formation. It is aggressively pursuing implementation of solar energy throughout the state, and increasing dedicated membership from all sectors.

The Council will have its next meeting at Noisette in North Charleston on August 26th, and is open to all interested groups and individuals.

Officers of the state chapter include:
*Chair: Sonny DuBose,
South Carolina Energy Office, Columbia;
*Vice Chair: Tone Nichols,
Tablerock Technologies, Greenville, SC;
*Secretary: Fletcher Mann, Esq.,
Greenville, SC;
*Treasurer: Allen Taylor, AIA,
LS3P Architects, Columbia, SC

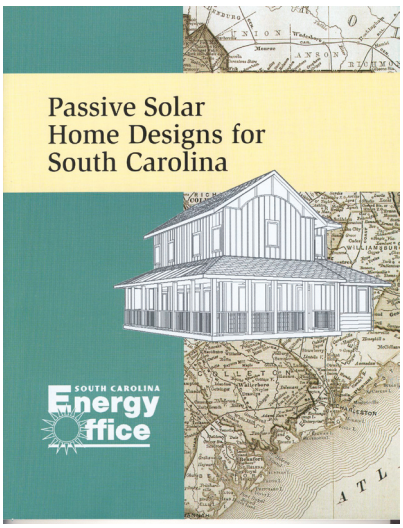
For more information, please contact Sonny DuBose at the South Carolina Energy Office, 1201 Main Street, Suite 430, Columbia SC 29201. Telephone number: 803-737-9852; e-mail: sdubose@gs.sc.gov.

Passive Solar Home Designs for South Carolina Available

The Passive Solar Home Designs for South Carolina publication has been updated by the South Carolina Energy Office and is available for sale. In this book, you will find a wealth of information on solar design techniques; ten energy efficient residential designs; solar water heating systems and photovoltaic systems.

The book can be purchased for the low price of $10.

For information on ordering a copy of this publication, you may contact Renee Daggerhart at the South Carolina Energy Office at 803/737-8035; or you may visit our website at: www.state.sc.us/energy/Residential/solar.htm.



DOE "SunWall" Amendment Becomes Law

The new Energy Bill passed by Cngress includes a House amendment that would authorize a major federal renewable energy/sustainable design project that has been championed by the American Institutes of Architects for over five years.

Congressman James L. Oberstar and Delegate Eleanor Holmes Norton offered the AIA supported amendment to H.R. 6, the Energy Policy Act of 2005, to authorize $20 million for the construction of the "Sun Wall" at the U.S. Department of Energy building.

After an intense, 48-hour AIA-led grassroots lobbying effort managed by the AIA Government Advocacy team, the measure was passed by a voice vote. Although the AIA provision did not make it into the Senate version of the Energy bill, it was included in the Energy Bill Conference Report, which has now passed both the U.S. House of Representatives and the U.S. Senate.

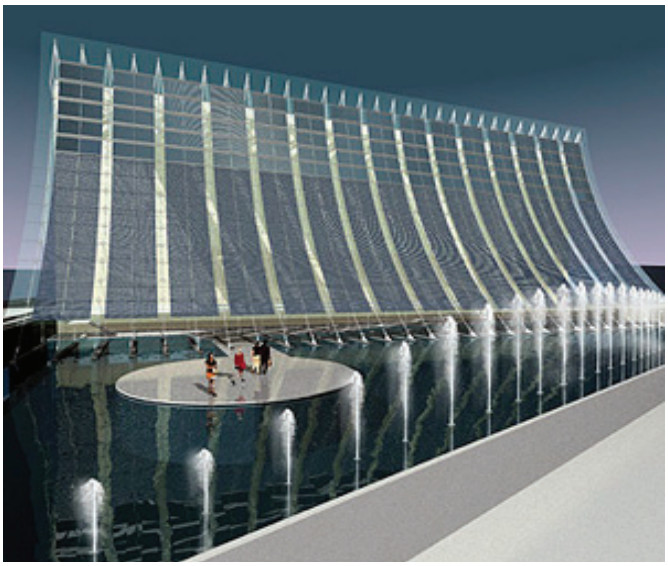
In 2000, the AIA and the U.S. Department of Energy announced the "Sun Wall" competition. Participants were to design a technologically advanced and visually exciting solar energy system for the 30,000-aquare-foot vertical south-facing wall of the Department of Energy National Headquarters Forrestal Building located at 1000 Independence Avenue in Washington, DC.

The current wall has no fenestration and faces a train track. The task called for an imaginative design that would integrate passive solar and solar voltaic technology into an existing federal building.

The competition was established to obtain a workable design for a demonstration project that would showcase the elements of current technology that can be incorporated into a sustainable design for existing buildings. "Its purpose was to create inspiration for others designing in both the public and private sectors to consider sustainable design more seriously," said Tom Wolfe, senior director of AIA Federal Affairs. "Demonstration projects help to jump-start the commercial manufacturing of hardware for use in future sustainable applications and drive down the price of that hardware."

"The wall would generate a maximum of 200 kW of electricity (in September) and would be the largest building-integrated solar energy system on any federal building in the United States," continued Wolfe. "The design incorporates photovoltaic panels with a solar thermal installation for hot water and hot air. The cost of the project is directly related to the site conditions and the requirement of shoring up the existing structure to support the new components."

"This is another example of the AIA acting quickly, rallying grassroots support among architects for Congressional action, and helping advance important projects that speak to our values," said Ron Faucheux, vice president, AIA Government Advocacy. "The AIA strongly supports a massive national commitment to renewable energy, energy conservation, and sustainable building design. We're working to find every possible legislative vehicle in Congress to advance this cause."



This is an artist's rendering of the winning design.

The winners of the AIA competition were architects Martin Wolf, FAIA; Mark Frisch, AIA; Devon Patterson, AIA; and Duane Carter, AIA, all of Solomon Cordwell Buenz & Associates, Chicago, and Mahadev Raman and David M. Scott Engineers of Ave Arup & Partners' New York City office. Details of their design can be found at http://www.edcmag.com or http://scb.com/.

West Quad Proves the Concept

The University of South Carolina's newest residence hall, West Quad, has overturned a great deal of conventional wisdom and has set the stage for a number of new technologies on campus, including solar. The 500-bed residence hall is expected to receive LEED Gold Certification from the US Green Building Council. It was built within the standard time-frame, and cost slightly less per square foot to construct than its recently-constructed "twin" East Quad. At the request of the University Trustees, it blends in with the traditional Georgian architecture prevalent on campus. The complex proves that green building doesn't have to take longer, cost more, or "look funny."

Conventional wisdom also held that solar was too expensive to be practical, given utility costs in the state. However, the 116.25 kW solar thermal system installed to preheat domestic hot water for the complex has proven to be so effective that USC's Housing Department hopes to retrofit other residence halls with the same technology. In addition to saving energy, solar heating of water also helps ensure a consistent supply of hot water for hall residents and the café.

The system consists of 1550 Thermomax tubes hidden on top of one of the buildings in the complex, and two 900-gallon storage tanks located under an adjacent building. The tanks are designed for 210 degreees Fahrenheit maximum operating temperatures. According to the manufacturer, this is the largest installation of this type in the country.

For more information, contact Michael Koman, USC Housing's Environmental Manager, at komanmd@gwm.sc.edu.

Solar Powered Pool Heater in Oconee County

Tablerock Technologies, LLC and Keowee Key Property Owners' Association recently announced that the Keowee Key Fitness and Racquet Center will soon sport a 50-panel solar system manufactured by Heliocol, to heat their junior Olympic swimming pool.

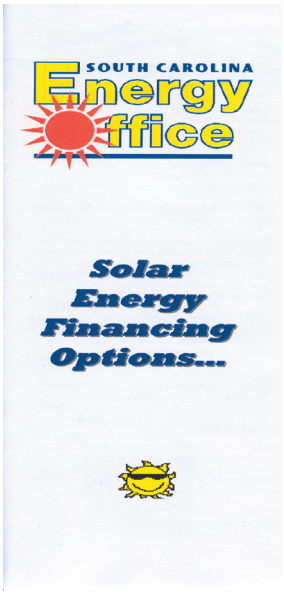
The system circulates pool water through the solar collectors located on a trellis near the pool. As the water flows through the collectors, the sun's energy heats it. The solar heated water then flows back to the pool. This simple and low maintenance design is cost effective. The same type system heats Olympic pools in Atlanta and Athens, Greece, as well as commercial and residential pools throughout the United States.

The system at Keowee will be finished in time to be a part of the National Solar Tour in October. At this time, the public will have an opportunity to tour the facility and view the system in action.

For more information, contact Tone Nichols at tnichols@solarcart.com.

Solar Energy Financing Options

The South Carolina Energy Office has published a "Solar Energy Financing Options" brochure. This brochure was developed through funding from our SC Million Solar Roofs Initiative grant. York Technical College developed the brochure. The brochure discusses ten financing opportunities available to homeowners and businesses to purchase solar equipment.



The brochure is available for downloading at www.energy.sc.gov. Click on Sustainability and Renewable Energy and follow the link for South Carolina Million Solar Roofs Initiative.

If you would like multiple copies of this brochure, you can contact Richard Horton at the South Carolina Energy Office at 803/737-8034.

Million Solar Roofs Regional News

The MSR Southeast Regional Partners met May 2, 2005, at the Disney Coronado Springs Resort in Orlando, Florida. Mr. Dwight Bailey of the Southeast Regional Office of the US Department of Energy (DOE), facilitated the meeting, and the members gave the following updates from their states.

The Partnership member from Tennessee reported the following:

- The Tennessee Million Solar Roofs (MSR) Partnership is working on identifying partners for the United States Department of Agriculture (USDA) Farm Bill funds.
- Tennessee MSR is working on a grant to help give the Tennessee MSR a jump start.
- Tennessee MSR is trying to get average people to live in zero energy homes by working through a low income home program.

For more information on what is going on in Tennessee with solar, visit: www.bigfrogmountain.com.

The Partnership member from Kentucky reported:

- The Kentucky MSR Partnership is working on training for solar hot water installers.
- The net metering bill passed on Earth Day 2004.
- Kentucky has set a goal of 500 water heating systems by 2010.
- The solar hot water program is being expanded to include schools and small businesses.
- The Bluegrass Energy Expo is scheduled for this Fall (September 24 – 25th).

For more information on what is going on in Kentucky with solar, visit: www.energy.ky.gov/programs/renewables/.

The Partners from Georgia reported:

- The Georgia Green Power Electric Membership Cooperatives (EMCs) are doing 16 PV systems on schools throughout the state.
- There was a conference held May 12 -13th at Georgia Technical College on solar, wind and biomass.
- Solar in Green Buildings has been of particular interest, so a Leadership in Energy and Environmental Design (LEED) workshop has been developed to promote this.

For more information on what is going on in Georgia with solar, visit: www.southface.org.

Partners from North Carolina reported:

- There are now 8 local partnerships in North Carolina.
- A registry has been developed in North Carolina which includes system details on line.
- North Carolina State University has a Renewable Energy Diploma series, covering wind, solar and biomass.
- There is continued progress with North Carolina GreenPower Program.
- Net metering and interconnection is being pursued in North Carolina.

For more information on what is going on in North Carolina with solar, visit: http://www.energync.net/.

Partners from Florida reported:

- The SunSmart Schools Program has received another round of funding for next year at $500,000. The program will focus on disaster shelters and may include a few larger systems in hurricane prone areas. A request has been made for an additional $750,000 from Federal sources.
- Additional funding has been received for the SunBuilt Program.
- Front Porch Sunshine has received an additional $500,000 for next year. This program provides solar water heaters to low-income homes that qualify for weatherization assistance.
- There were Farm Bill workshops in Stuart and Tallahassee, FL on May 18th and May 23, 2005 that target rural businesses and agricultural applications.

For more information on what is going on in Florida with solar, visit: www.fsec.ucf.edu/.